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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/281,809	03/31/1999	BO LIU	197/K38-1142	7664

7590 11/30/2001

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EXAMINER

GRENDZYNSKI, MICHAEL E

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 11/30/2001

15

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-15

Office Action Summary

Application No.

09/281,809

Applicant(s)

LIU ET AL.

Examiner

Michael E. Grendzynski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-18 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-18 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 9/21/01 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/281809 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-5, 7-16, 18, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto (US 4460637) in view of Asano (US 5670242). Miyamoto discloses an ink jet recording sheet comprising a support and one or more ink receptive layers thereon. *See* col. 3, ll 1-7. The one or more ink receptive layers is equivalent to applicants' one or more ink receptive layers--they comprise a binder (e.g., polyvinyl alcohol) and colloidal silica. *See* col. 4, ll 36-68 and col. 7, l 4. The peak pore distribution, when converted, falls within applicants' claimed range. *See* FIG. 3 and col. 6, ll 24-39. Miyamoto, while not disclosing the addition of a cationic polymer, does not limit the additional components which may be added to its receiving layer. Asano teaches that it is known in the art to add a cationic resin to an ink-receptive layer, motivated by the desire of increasing the moisture-resistance and the image density of the recorded images. *See* col. 6, ll 48-64. It would have been obvious to one of ordinary skill in the art at the time of the invention to add a cationic resin to the Miyamoto ink-receptive layers, motivated by the desire of promoting the agglomeration of the layers and increasing the moisture-resistance and the image density of the recorded images, as taught by Asano on col. 6, ll 48-64.

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With specific regard to claim 5, Miyamoto discloses that the ink receptive layer comprises an adhesive. *See* col. 4, ll 64-67.

With specific regard to claims 7, 9, 10, Miyamoto discloses that the ink jet recording sheet further comprises an interlayer that, in turn, comprises an adhesive. *See* col. 6, lines 40-46; col. 7, lines 1-25; and col. 8, lines 10-18. Also with respect to claim 7, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966. With specific regard to claim 10, Miyamoto discloses that the uppermost ink receptive layer comprises a pigment in the amount claimed by applicant, *see* col. 11, l 66 through col. 12, l 15 and col. 7, ll 18-26.

With specific regard to claim 11, *see* examples 7 to 12 (the particle diameter of the lower layer is greater than that of the pigment in the upper layer, and the pigment size of the lower layer is within applicants’ claimed range).

With specific regard to claim 13, Miyamoto discloses a particle size of the colloidal silica of the upper layer is within the claimed range. *See* col. 5, l 46 thorough col. 6, l 39.

With specific regard to claim 14, Miyamoto discloses the use of Snowtex OL, a known cationic silica, which is used by applicant in, inter alia, Example II-1. *See* Miyamoto Example 1. It would be obvious to one of ordinary skill in the art to use the same pigment source in any or all of the layers of the Miyamoto ink jet recording sheet.

With specific regard to claims 15-16, Miyamoto discloses the use of PVA 117, produced by Kururay Co. *See* Example 1. This is identical to the polyvinyl alcohol used by applicants in the examples (e.g., Example II-1). It is inherent that the PVA possesses the claimed saponification and polymerization values. In the alternative, the experimental modification of this prior art in order to ascertain optimum

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operating conditions (the saponification and polymerization values) fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233.

With specific regard to claim 18, Miyamoto discloses a particle diameter of the pigment within applicants' claimed range. *See* col. 5, lines 46-54.

With specific regard to claims 24-26, "[t]he patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). *See* MPEP §2113.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto, as applied to claims 1-5, 7-16, 18, and 23-26, above, in further view of the Snowtex Product Information. Miyamoto discloses that among the pigments that may be used include alumina and colloidal silica (e.g., Snowtex OL). *See* col. 5, lines 54-67 and Example 1. Snowtex product information teaches that Snowtex OL--one of the types of colloidal silica used by both Miyamoto and applicants--is acidic. *See* SNOWTEX product bulletin.

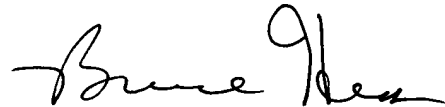
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Grendzynski whose telephone number is 703-305-0593. The examiner can normally be reached on weekdays, from 9:00 am - 5:00 pm.

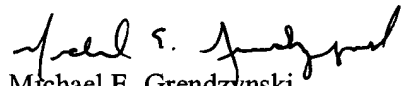
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3599.



BRUCE H. HESS
PRIMARY EXAMINER



Michael E. Grendzynski
Assistant Examiner
November 12, 2001